AUTHOR INDEX

Photochemistry and Photobiology

Volume 78

Aalbers, Remco I.J.M. 235
Abe, H. 349
Ahmed, Bissan 278
Aihua, Zou 640
Albani, J.R. 599
Albini, Angelo 425
Alpert, Bernard 93
Amat-Guerri, F. 30
Amirjani, Mohammad R. 205
Amslinger, Sabine 23
Ananthaswamy, Honnavara N. 37
Anderson, Douglas 517
Andersson, Helene 384
Andriamialisoa, Zo 623
Aruna, P. 197
Avraham, Hemy 105
Azizuddin, Kashif 1
Azuma, H. 349

Badruddin, Aamir 331
Banuelos Prieto, J. 30
Baptista, R.P. 1
Baqer, Ali 220
Barclay, L. Ross C. 248
Barnetson, Ross St. C. 331
Barros, Silvia B.M. 436
Barsanti, Laura 93
Bartczak, Adam 525
Basque, Marie Claude 248
Basu-Modak, Sharmila 256
Beckers, Jill 496
Berg, K. 283
Bernstein, Paul S. 138
Berthet, Jérome 558
Bezdetnaya, Lina 9
Bhagavathula, Narasimharao 43
Bhatti, Humaa 43
Bhosale, Prakash 138
Billsten, Helena H. 138
Bilska, M.A. 449
Bilski, P. 449
Boere, I.A. 271
Bolton, James R. 146
Bonsted, A. 283
Borle, Francois 377
Bormans, Guy 607
Bourgeois, Dominique 131
Bowen, Benjamin 576, 582
Brennan, Meghan 43
Breslin, Tara M. 462
Brun, Pierre-Herve 124
Brunner, H. 481
Burnett, Bethany J. 225
Busch, Theresa M. 75

Cabral, J.M.S. 1
Caffieri, Sergio 425
Casas-Finet, Jose R. 313
Chandrashekar, T.K. 487
Chen, Bin 278
Chen, Hua 496
Chen, Qun 496
Chiu, Song-Mao 1
Cholody, Wieslaw, M. 313
Chunwei, Yuan 640
Cohen-Luria, Rivka 105
Conrad II, Peter G. 23
Copin, Marie-Christine 124
Corrêa, M.P. 49
Costela, A. 30
Coulomb, Bernard 168
Crielaard, Wim 131

Da Silva, Vanessa V. 436
Da Silveira, Vivian C. 470
DaCosta, Ralph S. 384
Darlington, Steven 633
Dautremepuits, Claire 420
Dawe, Robert S. 55
de Bruijn, H.S. 271
de Bruin, R.W.F. 271
de Witte, Peter A.M. 278, 607
Degreef, Hugo 68
Demuynck, S. 599
Dewez, David 420
D'Hallewin, M.A. 9
Dietze, A. 283
Dubertret, Louis 168
Dubuisson, P. 49
Dudkowiak, Alina 525
Durbeej, Bo 159

Edixhoven, Annie 82
El Moshni, Sadok 98
Enderlein, Jörg 576
Endlicher, Esther 393
Eriksson, Leif A. 159
Evangelista, Valtere 92

Fasani, Elisa 425
Favaro, Giovanna 558
Fedorov, A. 15
Fekete, A. 213
Ferguson, James 55
Fett-Neto, Arthur G. 470
Fingar, Victor 407
Finlay-Jones, John J. 633
Foster, Thomas H. 615
Frackowiak, Danuta 525
Franck, Fabrice 543
Freitag, Lutz 124
Frelinger, John G. 615
Friedberg, Joseph S. 75
Fungaloi, Patrick 475

Gabeler, Edward E.E. 82
Gaillard, Elizabeth R. 298
Gallinat, Stefan 355
Ganesan, S. 197, 487
Garbo, Greta M. 407
García-Moreno, I. 30
Garmyn, Marjan 68
Gaspar, Robert 278
Gercken, Günther 355
Gies, Peter 342
Gillies, Robert 220
Giraud, Michel 623
Girotti, Albert W. 262
Gitz, Dennis C. 529
Givens, Richard S. 23
Glandières, Jean-Marie 98
Glatstein, Eli 75
Gómez, C. 30
Gordon, Matthew J. 256
Goren, Evan 146, 612
Görner, Helmut 440
Grad, Gabriella 225
Green, Adele 633
Gregianini, Tatiana S. 470
Grimbaldeston, Michele A. 633
Grove, Jason 323
Grumiaux, F. 599
Gryczynski, Zygmunt K. 313
Gualtieri, Paolo 92
Guglielmetti, Robert 558
Guillemin, François 9

Hahn, Stephen M. 75
Halliday, Gary M. 331
Hanson, Deborah K. 114
Harper, Willa S. 298
Hart, Prue H. 633
Hatao, Masato 331
Hausmann, F. 481
Haylett, A.K. 337
Hegedüs, M. 213
Hellingwerf, Klaas J. 131, 290
Henriques, Amelia T. 470
Hetzel, F. W. 496
Hiraoka, Wakako 241
Hirayama, J. 349
Hirst, Maurice 88
Hoeppe, P. 603
Høgset, A. 283
Huang, Z. 496

Huygens, Ann 607
Huyghe, Dieter 607

Ibbotson, Sally H. 55
Ikebuchi, K. 349
Ikeda, H. 349
Inanami, Osamu 241
Inerowicz, H. Dorota 323
Ivan, Marius G. 416
Iwaki, Haruhi 331
Iwamoto, Masaki 503

Jain, N.K. 306
Jansen, Duco 517
Jeandet, Philippe 420
Jung, Jin 109
Junzhe, Hu 640

Kaid Johar, S.R. 306
Kamo, N. 349, 503
Kamuhabwa, Appolinary R. 607
Kang, Sewon 43
Karasawa, Fujio 372
Keely, Patricia J. 462
Kerber, Vitor A. 470
Kessel, David 407, 431
Kikuchi, Makoto 372
Kim, Tae-Hueng 37, 228
Kireev, Igor I. 592
Knüchel, Ruth 393, 481
Knussmann-Hartig, Elke 355
Kochevar, Irene 61, 361
Koepke, P. 603
Kohyama, Shinya 372
Kollias, Nikiforos 220
Kolossov, Vladimir L. 184
Kopelman, Raoul 587
Kopetz, Karen J. 184
Korbelik, Mladen 400
Kort, Remco 131
Korytowski, Witold 262
Kosakowska-Cholody, Teresa 313
Koteeswaran, D. 197
Krieg, René C. 393
Kripke, Margaret L. 37, 228
Krupa, Sagar V. 535
Kuchel, Johanna M. 331
Kuhn, Richard, J. 567
Kuhnle, Gunter 256
Kuppen, Peter J.K. 235
Kurosaki, Y. 349
Kuwabara, Mikinori 241

Laan, Wouter 290
Laible, Philip D. 114
LaMuraglia, Glenn 475
Landuyt, Willy 278
Lartillot, Véronique 630
Le Panse, Rozen 168
Lee, Hyun-Woo 109
Leprêtre, A. 599
Leroy, Sylvie 124
Levorato, Laura 425
Liras, M. 30
Liu-Gitz, Lan 529
Lopez Arbeloa, F. 30
Lopez Arbeloa, I. 30
Luguya, Raymond 431
Lykke, Keith R. 146

Madhuri, S. 197
Madronich, Sasha 456
Mahadevan-Jansen, Anita 517
Man, Irene 55
Manjula, D. 511
Marchal, Sophie 9
Marchman, Gillian 633
Marquette, Charles-Hugo 124
Martinho, J.M.G. 15
Matsuo, Hirotaka 372
Matuszak, Z. 449
Meirelles, Renata R. 436
Menon, Elton L. 567
Messmann, Helmut 393
Michejda, Christopher J. 313
Michel, Laurence 623
Micheletti, María Isabel 456
Miolo, G. 425
Mitra, Soumya 615
Módos, K. 213
Mohanty, J. 153
Molcho, Jonathan 105
Moll, Ingrid 355
Monnier, Philippe 377
Moodycliffe, Angus M. 228
Moore, J.V. 337
Morimoto, Yuji 372
Morioka, H. 349
Morris, Zachary S. 114
Morrison, Harry 567
Moustrou, Corinne 555
Mysliwa-Kurdziel, Beata 205

Nakai, Kanji 372
Nakajima, Mihoko 241
Nakajima, Takayuki 241
Nerusu, Kamalakar C. 43
Ni, Yicheng 278
Nigri, Giuseppe 475
Nikaido, O. 349
Niziolek, Magdalena 262
Norval, Mary 228

Ogata, Maiko 241
Oleinick, Nancy L. 1
Oppenrieder, A. 603
Ortica, Fausto 558
Ou-Yang, Hao 220

Pal, H. 153
Palmer, Gregory M. 462
Parisi, A.V. 179
Parmeswaran, D. 487
Parola, Abraham H. 105
Passarelli, Vincenzo 92
Payne, Peter W. 400
Perera, Rushika 567
Piacentini, Rubén D. 456
Plana-Fattori, A. 49
Polivka, Tomás 138
Polyakov, Vladimir Yu 592
Popovic, Radovan 420
Porto, Diogo D. 470
Prickett, Claire D. 88
Proteggente, Anna R. 256
Prusov, Andrey N. 592
Pupe, Annemie 68
Pushpan, S.K. 487

Qiang, Gu 640

Radu, Alexandre 377
Rahn, Ronald O. 146
Ramanujam, Nirmala 462
Ravelli, Raimond B. 131
Ravi Kumar, M. 487
Rawal, U.M. 306
Rebeiz, Constantin A. 184
Reszka, K.J. 449
Reuder, J. 603
Ricci, Andrea 425
Rice-Evans, Catherine A. 256
Rissler, Arnaud 623
Roberts, J.E. 88
Robertson, Bryan O. 633
Robichaux, Amy 517
Robinson, D.J. 271
Rontó, Gy. 213
Ropke, Cristina D. 436
Roskams, Tania 607
Rovers, Jeroen P. 235

Sá e Melo, Teresa 623
Sabburg, J. 179
Sadiq, Iqbal 220
Samat, André 558
Santos, A.M. 15
Santus, René 623
Sapre, A.V. 153
Sarna, Tadeusz 323
Sastre, R. 30
Sawada, Tania C.H. 436
Scaiano, J. C. 416
Schiffer, Marianne 114
Schlottmann, Klaus 393
Schoefs, Benoît 543
Schölmerich, Jürgen 393
Schoonderwoerd, Kees 82
Schotte, Friedrich 131
Schreder, J. 603
Schween, J. 603
Seeger, Stephan 393
Shakil, A. 496
Shapiro, H. 496
Shaw, Ping-Shine 146
Shen, Tao 411
Shimono, Kazumi 503
Singh, Anil K. 511
Sluiter, Wim 82, 475
Smith, Deborah 75
Srinivasan, A. 487
Stäb, Franz 355
Statius van Eps, Randolph G. 82, 475
Stefan, Mihaela I. 146
Stephenson, Vanessa C. 248

Sterenborg, H.J.C.M. 271
Strzalka, Kazimierz 205
Südel, Kirstin M. 355
Sudo, Yuki 503
Suh, Hwa-Jin 109
Sun, Jinghai 400
Sundqvist, Christer 205

Taipa, M.A. 15
Tang, Fei-Li 175
Tarasov, Sergey G. 313
Teiten, Marie-Hélène 9
Terence S.C Poon, ... 331
Terpstra, Onno T. 235
Thompson, David H. 323
Thurnauer, Marion C. 114
Tilanus, H.W. 271
Timberlake, George T. 23
Tremblay, Alain 124
Trevithick, John R. 88
Turnbull, D.J. 179
Tyrrell, Rex 256

Ullrich, Stephen E. 37, 228
Usuda, Jitsuo 1

van den Bergh, Hubert 377
van den Boogert, J. 271
van der Horst, Michael A. 290
van Duijnhoven, Frederieke H. 235
van Hillegersberg, Richard 82
van Stokkum, Ivo H. 290
van Urk, Hero 82, 475
Varani, James 43
Vasavada, A.R. 306
Vengadesan, N. 197
Venkatesan, P. 197
Venzke, Kirsten 355
Verbruggen, Alfons 607
Vermeersch, Gaston 558
Vernet, Guy 420
Vicente, M. Graça H. 407, 431
Vinqvist, Melinda R. 248
Voorhees, John J. 43

Wagnières, Georges 377
Wahlman, Judit 88
Wang, Jin 175
Ward, T.H. 337
Waterman, Peter 475
Weber, Jörg F. 23
Wenck, Horst 355
Wileyto, E. Paul 75
Williamson, Craig E. 225
Wilson, Brian C. 384
Wittern, Klaus-Peter 355
Woodbury, Neal W. 576, 582
Wright, Jill 342
Wulff, Michael 131

Xu, Shangjie 411

Yamabi, Masaji 503
Yan, Fei 587
Yarosh, Daniel B. 249
Yemelyanov, Alexander 138
Yom, Sue S. 75
Youdim, Kuresh 256
Yousef, Abraham L. 23
Yuan, Gu 175

Zentz, Christian 98
Zhang, Manhua 411
Zhuang, Shougang 61, 361

SUBJECT INDEX

Photochemistry and Photobiology

Volume 78

acetylcholine 372
actinometry 146
action spectra 220, 456
adenovirus 283
all-*trans*-retinal 298
alpha-tocopherol 436
aluminum phthalocyanine tetrasulfonate 323
5-aminolevulinic acid 82, 271, 337, 393
5-aminolevulinic acid esters 481
amniocentesis 105
amphiphilicity 411
antioxidant 68, 109, 262, 436
apoptosis 1, 61, 231, 256, 623
aquatic organisms 246
aromatic amines 153
Arrhenius plot 503
Asplanchna girodi 246

bacteriochlorophyll c 525
bacteriorhodsopsin 511
Basal cell carcinoma 633
Basal cell nevus syndrome 337
Belousov-Zhabotinsky reaction 640
bile acids 407
biological sensitivity 456
biological UV dosimeter 213
biologically active radiation 456
biologically effective dose 213
biomass 420
bi-photochromic compounds 558
bisimidazoacridine 313
blue light activation 290
brachycerine 470
Brazil 49
breast cancer 9, 462
brochoscopy 124

cancer 462, 517
carbon dioxide 535
carcinoma cells 607
carotenoid 114
carotenoproteins 138
caspase 61
catalase 306
cataracts 88, 306
cell death 400
cervix carcinoma 231
charge distribution 431
chlorin macrocycle 543
chlorophyll 420
chlorophyll synthesis 184, 543
chromatin 592
chromatography 323
climate change 535
clonogenic survival 337
coelomic fluid 599
collagen 23
collagen damage 43
collagenolytic enzyme 43
colorectal cancer 225
comet assay 337
conductivity 440
corticosteroids 425
crosslinking 23, 592
crystal morphology 131
cutinase 15
cyanine dye 576, 582
cyclobutane pyrimidine dimers 159
cyclooxygenase 68
cytochrome-c 9
cytokine 75
cytoprotective action 262

database 384
delayed hypersensitivity 37, 249
diabetis 88
diazopyruvamides 23
diphenylpolyenes 511
dipole strength 525
disulphide bridge 15
DNA 249, 313
DNA binding 576, 582
DNA damage 159, 213, 246, 349, 567
DNA dyes 592
DNA photocleavage 175
DNA-protein interaction 213
dose response curve 55
dosimetry 220, 271, 603
drug uptake 487

ecological diagnosis 599
eicosanoids 68
Eisenia andrei 599
Eisenia fetida 599
electron paramagnetic resonance 411
eletron transfer 153
endogenous porphyrins 197
endothelium 475
endothelium-derived factors 475
energy transfer 184
environmental interactions 535
enzymatic processes 416
enzyme activity 9
erythema 180, 603
erythemal irradiance 49
ethanolamine 298
ethidium bromide 592
etioplast 205, 543
Euglena 92

Fas ligand 61
femtosecond pump-probe spectroscopy 138
Fenton chemistry 567
fibroblasts 168, 256, 337
flavonoid localization 529
flavoprotein 92
flow cytometry 623
fluorescence 15, 92, 197, 205, 271, 313, 384, 411, 416, 420, 431, 462, 511, 599
fluorescence anysotropy 98
fluorescence polarization 105
fluorescence quenching 153
Foscan® 9
free radicals 262, 440, 567
FTIR 290

Gaussian components 205
gene therapy 283
GI tract 393
glucuronidation 256
glutathione peroxidase 306
Golgi apparatus 231
green fluorescent protein 612
greening 184
growth factor receptors 168, 361

halobacterial transducer Htr 503
Halobacterium salinarum 503
hampster model 377
heat shock proteins 615
HeLa cells 231
histamine 633
horseradish peroxidase 225, 416
human blood plasma 238
human exposure 342
human leukemia cells 61
human skin 43, 355
human vision 640
hydrogen peroxide 256
6-hydroxymelatonin 449
hypericin 88, 278, 607
hyperoxygenation 496
hypocrellins 411
hypoxia 278

image evolution 640
immunosuppression 249, 633
indoles 449
inflammatory response 400
intercalating dye 576, 582
intercalation 313
intraoperative photodynamic therapy 75
intrinsic fluorescence 105
iodide/iodate 146

ketene amides 23

laser 124
laser flash photolysis 440
lasing properties 30
Lemma gibba 420
lens epithelium 306
light therapy 88
lipid peroxidation 262
lipofuscin 298
lipophilic analogs 607
liver diseases 197
liver tumors 225
lung cancer 124
lutein 138

macular pigment 138
malignant pleural mesothelioma 75
malignant human breast cells 462
Marcus theory 153
marine organisms 109
mass spectroscopy 323
matrix metalloproteinase 355
melatonin 449
metabolic tetrapyrroles 184
metalloproteinase-1 43
methoxsalen 55
micelles 238
microscopy 462
microspectrofluorometry 92
microspectrophotometry 131
minimal erythema dose 55
minimal melanogenic dose 331
minimal phototoxic dose 55
mitochondria 1
mitochondrial membrane potential 9
mitomycin C 278
monoterpene-indole alkaloid 470
mouse tumors 400
m-THPC 587
mycosporine glycine 109

NADPH photochlorophyllide 205
nanoparticles 587
naphthopyran 558
Natrobacterium Pharaonis 503
natural killer cells 225
necrosis 256, 623
4-nerolidylcathecol 436
Nile red 153
nitric oxide 262
NMR analysis 558
non-invasive diagnosis 105
nonlinear optical medium 640
nucleoprotein complexes 592

ocular photosensitivity 88
opsin shift 511
optical diagnosis 197
oral malignancy 197
organotypic 517
outside workers 342
oxidative stress 61
oxidoreductase 205
ozone 220, 535
ozone depletion 456

palladium bacteriopheophorbide 377
partition coefficient 487
pharmacodynamic 377
pharmacokinetics 82
phenylephrine 372
phosphatidylinositol-3-OH kinase 361
photoactivation 23
photoactive yellow protein 131
photoaging 43, 355
photobleaching 271, 449
photochemical internalization 283

photochemistry 425
photochemotherapy 55
photochromism 558
photocycle kinetics 131
photocytotoxicity 607
photodegradation 425
photodynamic damage 109
photodynamic diagnosis 481
photodynamic therapy 1, 75, 82, 225, 231,271, 278, 283, 337, 377, 384, 400, 407, 411, 431, 475, 481, 487, 496, 587, 615
photoenyzmes 543
Photofrin® 496
photohemolysis 425, 487
photoimmune suppression 37
photoimmunology 249
photomorphogenesis 529
photooxidation 238, 298
photoprotection 114
photoreactivation 246
photoreceptors 92
photoreduction 440
photosensitization 109, 262, 377, 393
photosynthesis 114, 420
photosynthetic reaction center 114
phototoxicity 124, 425, 481, 623
phthalocyanine 1
Phthomorphe umbellata 436
Pisum sativum 205
plasmenylcholine photooxidation 323
plerectomy 75
poly(ADP-ribose) polymerase 400
poly(methyl methacrylate) 30
polyamide-4'-chlorophenylsufonyl conjugate 175
polymers 30
polysulphone badges 342
polysulphone film 220
porphyrins 431, 487
prolameller body 543
prostaglandin 372
protein conformation 15
protein dynamics 15
protein elasticity 98
protein kinase B/Akt 361
protein-protein interaction 503
protein-solvent interaction 98
protochlorophyllide 540
proton transfer 290
protoporphyrin IX 82, 271, 393, 481
protoporphyrin precursor 481
psoralen 623
Psychotria brachyceras 470
PUVA therapy 623
pyrimidine dimer 349
pyrromethene PM567 analog dyes 30

quantitative polymerase chain reaction 213
quantum yield 146
quinones 440

radical kinetics 416
radical peroxidation 238
radiometer 603
raft 517
Raman spectroscopy 517
reactive oxygen species 68, 411, 475
refractive index 525
respiratory distress syndrome 105
restenosis 82
retinoids 298
review 529, 535, 543
Rhodobacter sphaeroides 290
rhodopsin-like proteins 92
ribotoxic stress 168
Rubiaceae 470
ruthenium 640

scattered UV light 180
Schiff Base 298, 511
secondary metabolism 529
serotonin 372, 449
serum cytokine 75
shade areas 180
silica 587
single molecule spectroscopy 576, 582
singlet oxygen 61, 109, 168, 231, 238, 323, 349, 361, 449, 470, 567, 587
skin 436
skin cancer 49, 331, 633
skin typing 331
solar exposure 342
solar radiation 603
solar simulated radiation 331
solar UVB 220
sol-gel method 640
solvent effects 525
Southern Hemisphere 180
spectrofluorometry 197
spheroids 607
stomatal behaviour 529
stress response 615
structure/function relationships 114
sunburn 331
sunscreen efficacy 37
supercoiled DNA 175
superoxide dismutase 306

tension 372
thermal debaturation 503
thermostability 30
thiazole orange 576, 582
thiophene 558
thrombosis 475
thylakoid topography 184
thymines 159
time-correlated photon counting 576, 582
tin etiopurpurin 407
tissue 384
tissue culture 517
tissue inhibitor 355
tissue welding 23
Tookad® 377
traimcinolone-16,17-acetonide 425
transcriptional anti-repressor protein 290
triplet energy transfer 114
trithia sapphyrin 487
tryptophan 15, 462
tryptophan fluorescence 98
tumor cell killing 496
tumor cures 400
tumor hypoxia 496
tumor necrosis 68
tumor oxygenation 278
tyrosinate 290

ultraviolet index 49
urocanic acid 249, 567, 633

ursodeoxycholic acid 407
UVA effects 168, 256, 567
UVB effects 55, 68, 372, 529, 535
UVC effects 349
UVR effects 37, 49, 159, 213, 246, 249, 306, 342, 355, 436, 456, 470, 603, 633

vascular effect 278
vesicles 323
virus inactivation 349

wavelength dependence 146
winter 180

xanthophyll binding protein 138

zeaxanthin 138